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Drawing  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Cooper et al.

Serial No.: 09/306,189

Filed: May 6, 1999

For: **METHOD AND APPARATUS  
FOR CONVERTING PROGRAMS  
AND SOURCE CODE FILES  
WRITTEN IN A PROGRAMMING  
LANGUAGE TO EQUIVALENT  
MARKUP LANGUAGE FILES**

§ Group Art Unit: 2776

§

§ Examiner: Unknown

§

§ Attorney Docket No.: AT9-98-920

§

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By: 

Jennifer Wright

**TRANSMITTAL DOCUMENT**

Assistant Commissioner of Patents  
Washington, D.C. 20231

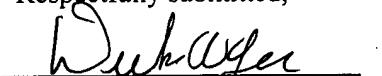
Sir:

ENCLOSED HEREWITH:

- Letter to Official Draftsman;
- 19 pages of drawings; and
- Our return postcard.

No fees are believed to be necessary. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Deposit Account No. 50-0392.

Respectfully submitted,



Duke W. Yee

Registration No. 34,285

CARSTENS YEE & CAHOON, LLP

P.O. Box 802334

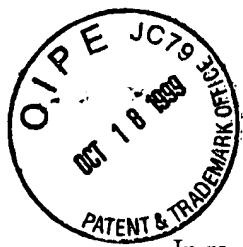
Dallas, Texas 75380

(972) 367-2001

ATTORNEY FOR APPLICANT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO. AT9-98-920

In re Application of: **Cooper et al.**

Serial No.: **09/306,189**

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For: **METHOD AND APPARATUS FOR  
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CODE FILES WRITTEN IN A  
PROGRAMMING LANGUAGE TO  
EQUIVALENT MARKUP LANGUAGE FILES**

§ Examiner: **Unknown**

§ Group Art Unit: **2776**

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**LETTER TO THE OFFICIAL DRAFTSMAN**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

Submitted herewith are formal drawings ( 19 sheets) for the above-identified application.

Respectfully submitted,

Duke W. Yee  
Registration No. 34,285  
Carstens, Yee & Cahoon, LLP  
P.O. Box 802334  
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ATTORNEY FOR APPLICANT

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APPROVED BY O.G. FIG.  
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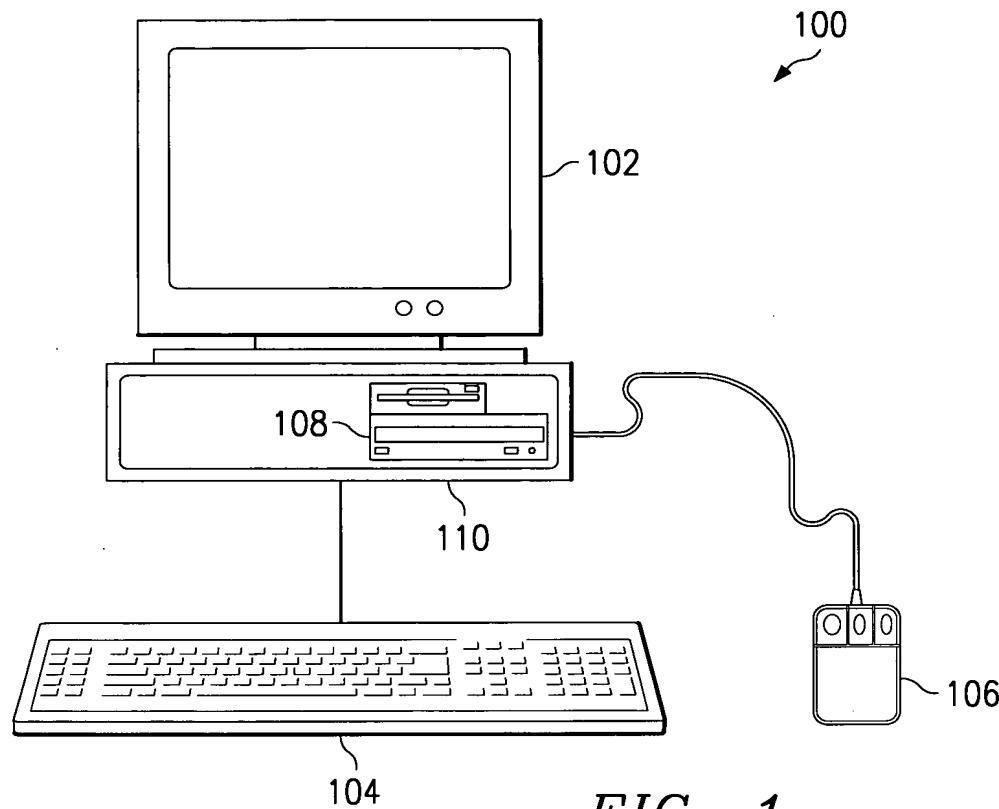


FIG. 1

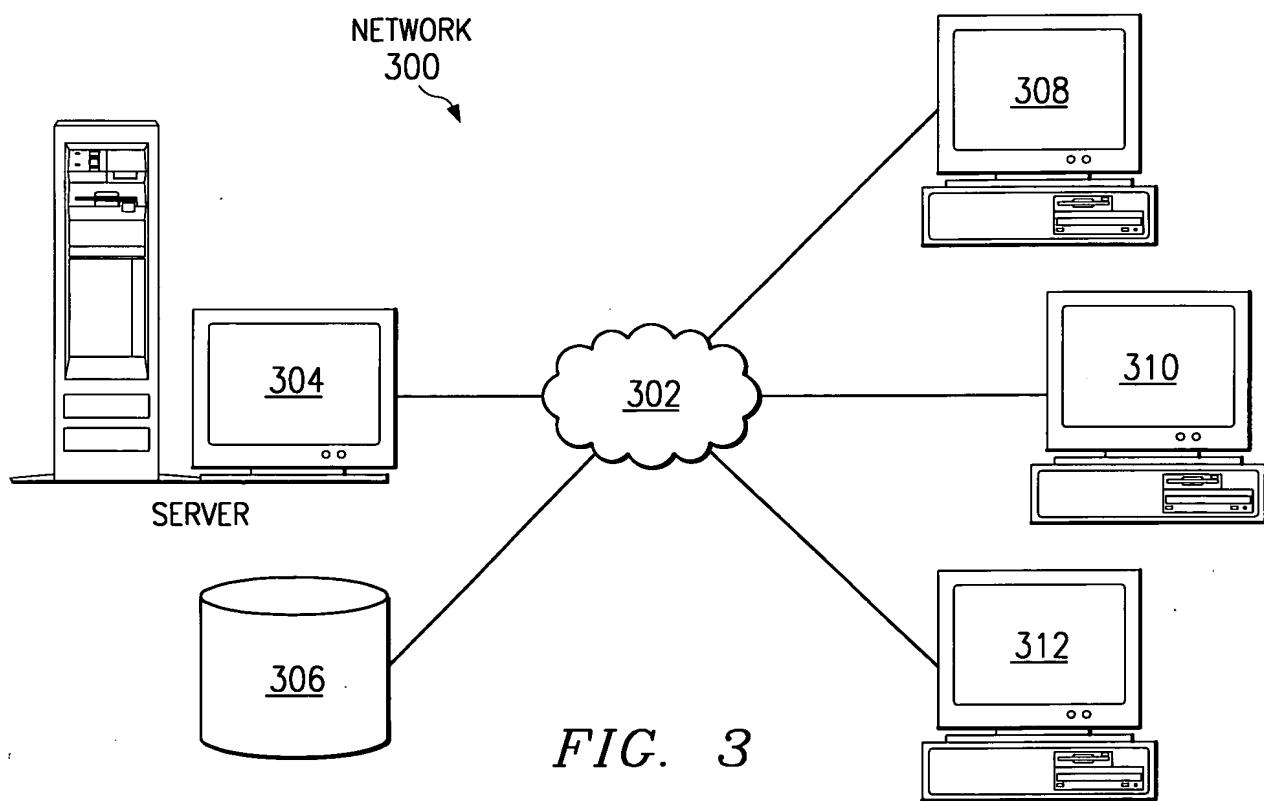


FIG. 3

APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
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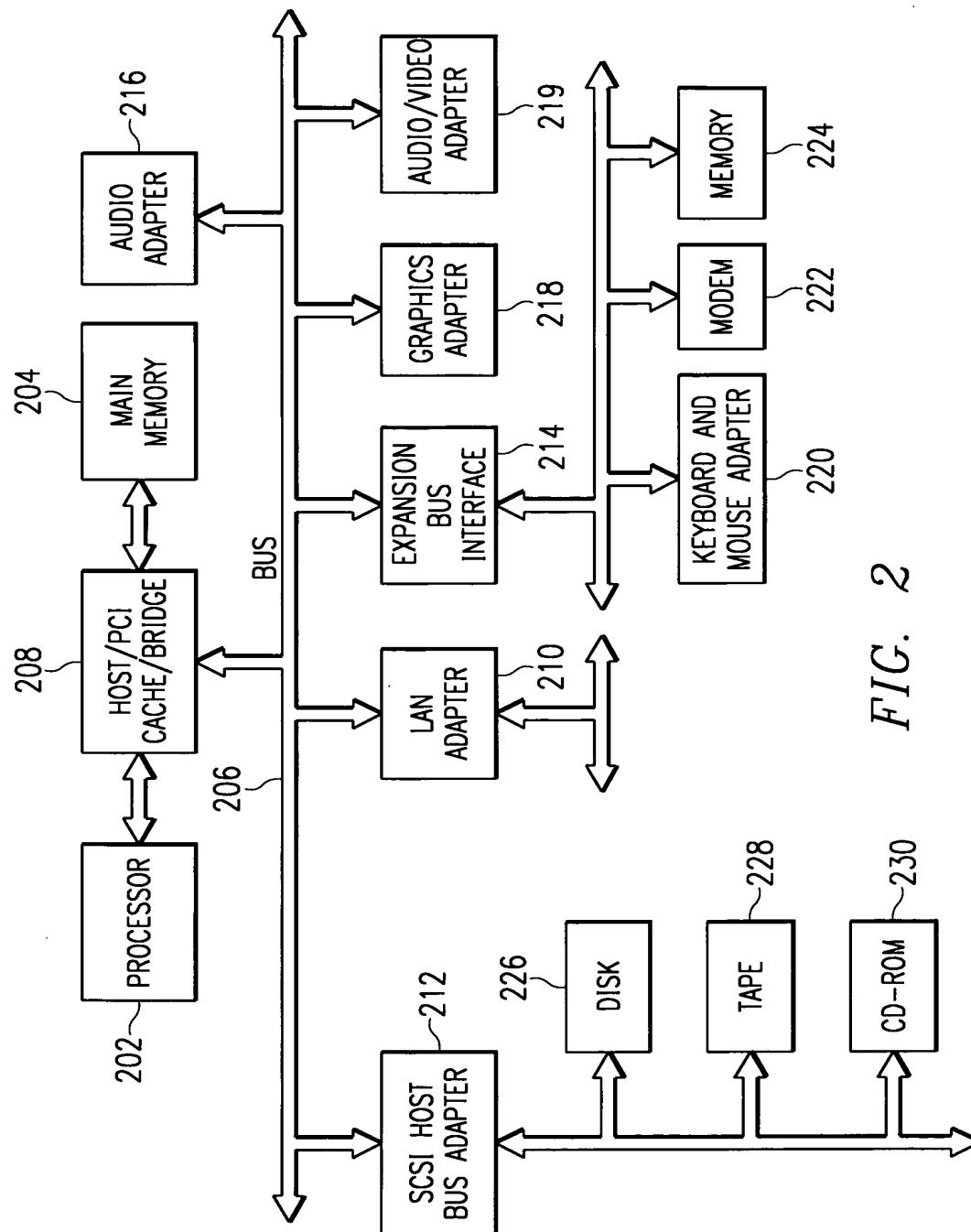
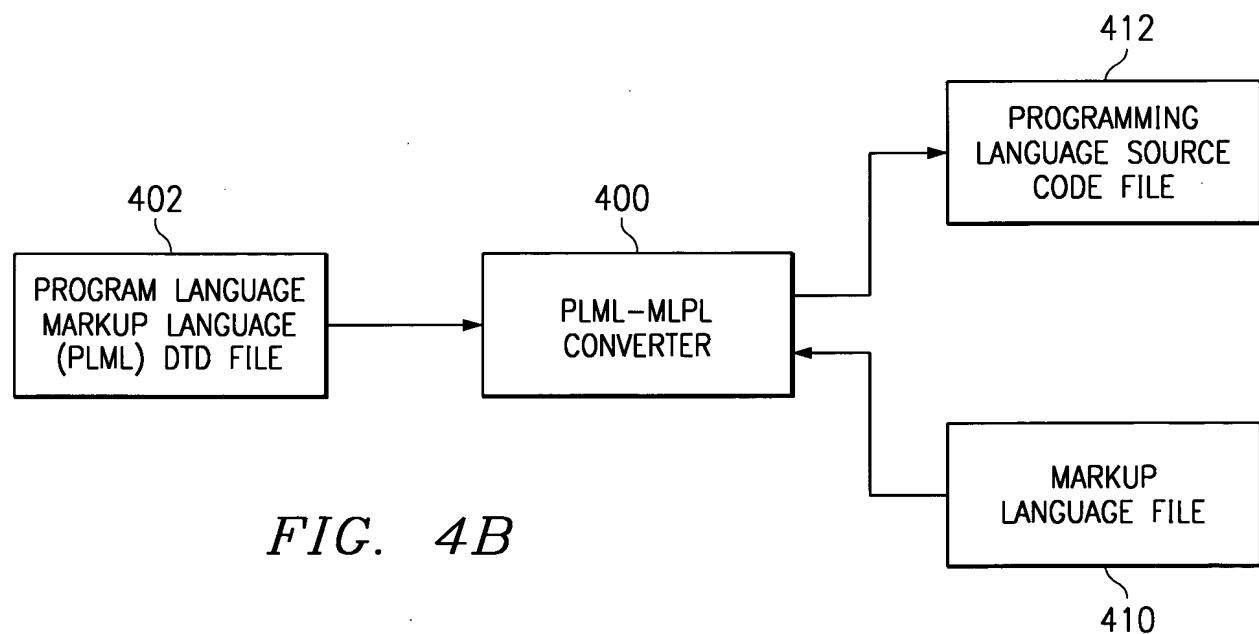
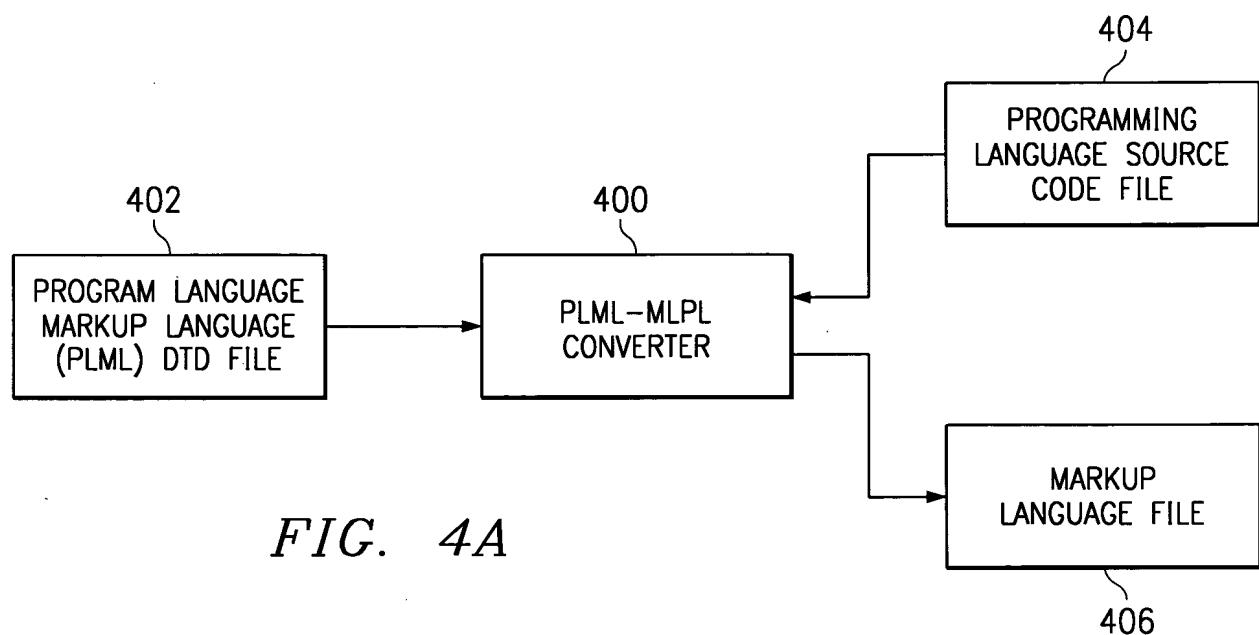


FIG. 2

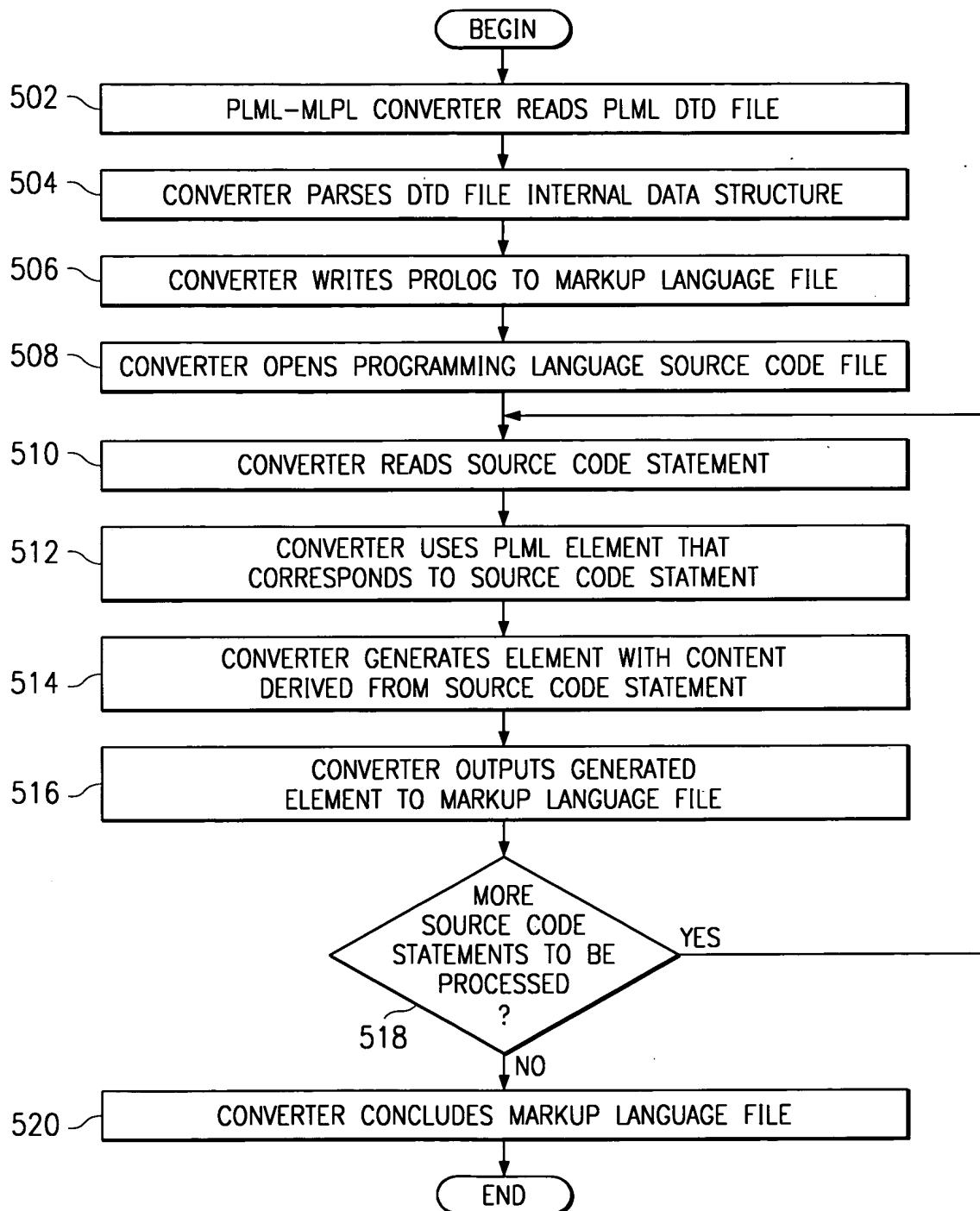
APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
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APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
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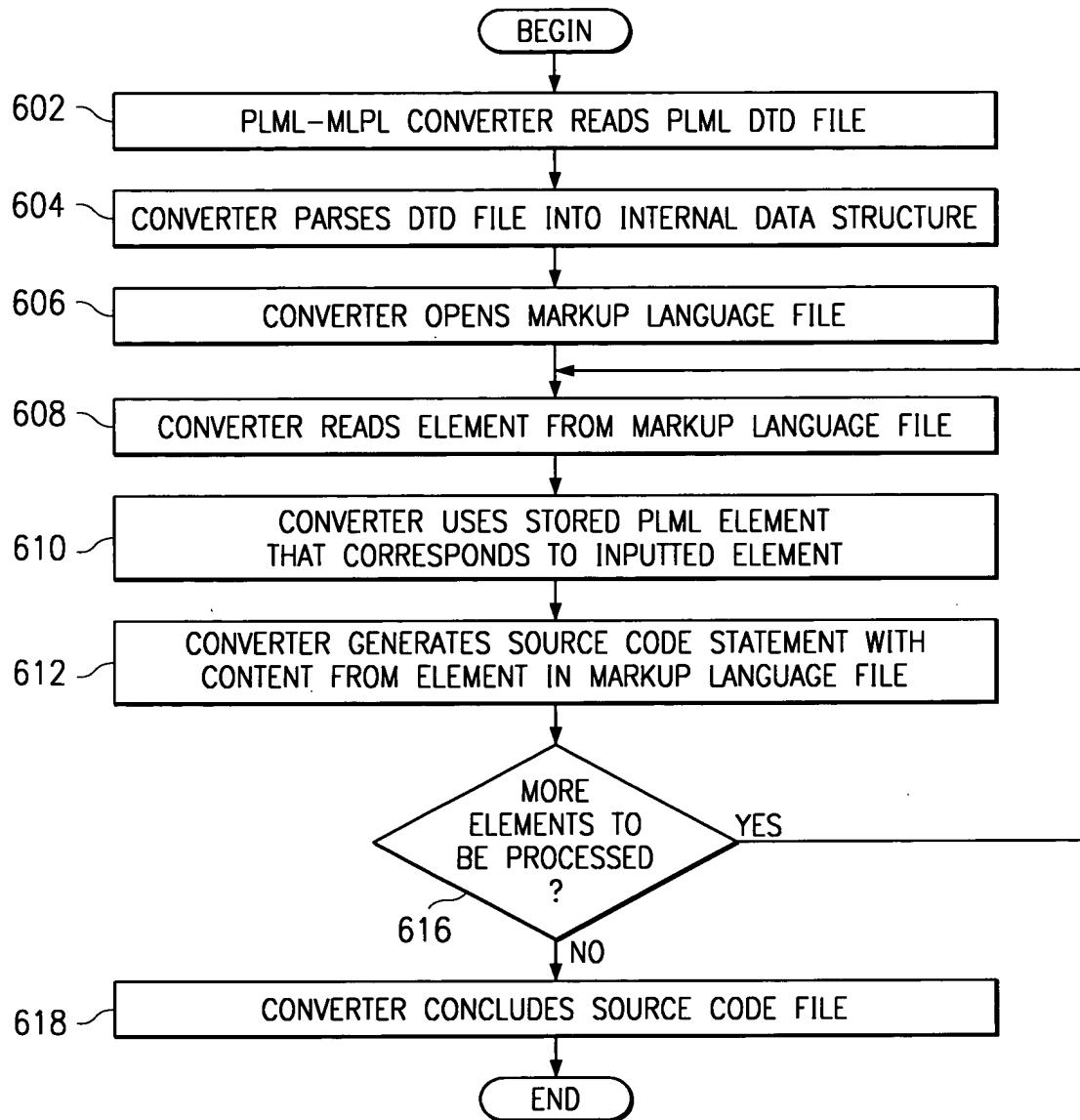
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*FIG. 5*

APPROVED BY	O.G. FIG.
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*FIG. 6*

APPROVED BY	O.G. FIG.
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702 { <! ENTITY % base\_content\_model'(functionA | functionB)\*'>

704 { <! ELEMENT plml % base\_content\_model;>

706 } <! ELEMENT functionA EMPTY>  
 } <! ATTLIST functionA arg1 CDATA #REQUIRED  
 }                          arg2 CDATA #REQUIRED  
 }>

*FIG. 7*

708 } <! ELEMENT functionB EMPTY>  
 } <! ATTLIST functionB arg1 CDATA #REQUIRED  
 }>  
 } <! -- End of DTD for Programming Language Markup Language-->

802 } main programA (){  
 } integer temp;  
 }                          initProg ();  
 804 {                          temp=functionA(5,7);  
 806 {                          temp=functionB(25);  
 } }

*FIG. 8*

902 } <? plml version = "1.0"?>  
 } <! DOCTYPE plml SYSTEM "plml.dtd">  
 904 { <plml>  
 906 } <! -- main programA (){ --->  
 } <! -- integer temp;            --->  
 } <! -- initProg ();            --->  
 908 { <functionA arg1="5"arg2="7" />  
 910 { <functionB arg1="25" />  
 912 { <! -- }                    --->  
 914 { </ plml>

*FIG. 9A*

APPROVED BY	O.G. FIG.
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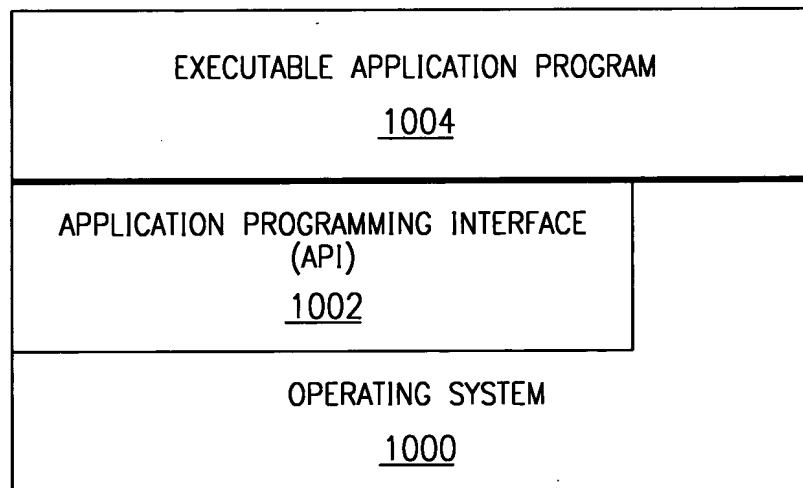
```

922 { <? plml version = "1.0"?>
      <! DOCTYPE plml SYSTEM "plml.dtd">

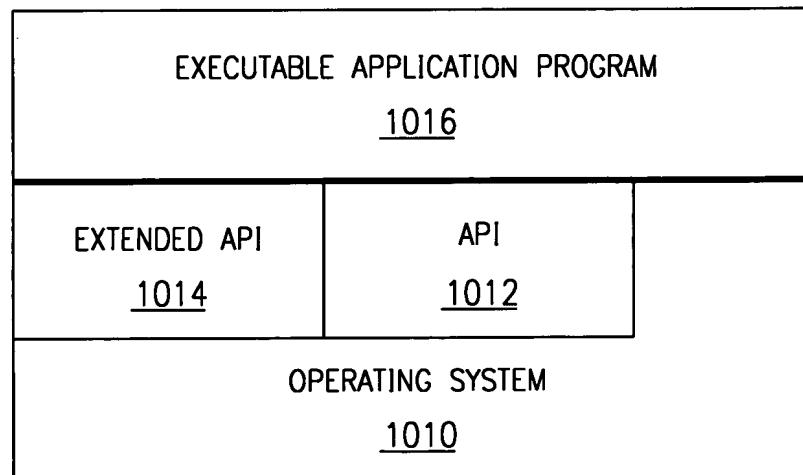
924 { <plml>
920 926 { <functionA arg1="5"arg2="7" />
928 { <functionB arg1="25" />
930 { </plml>

```

*FIG. 9B*



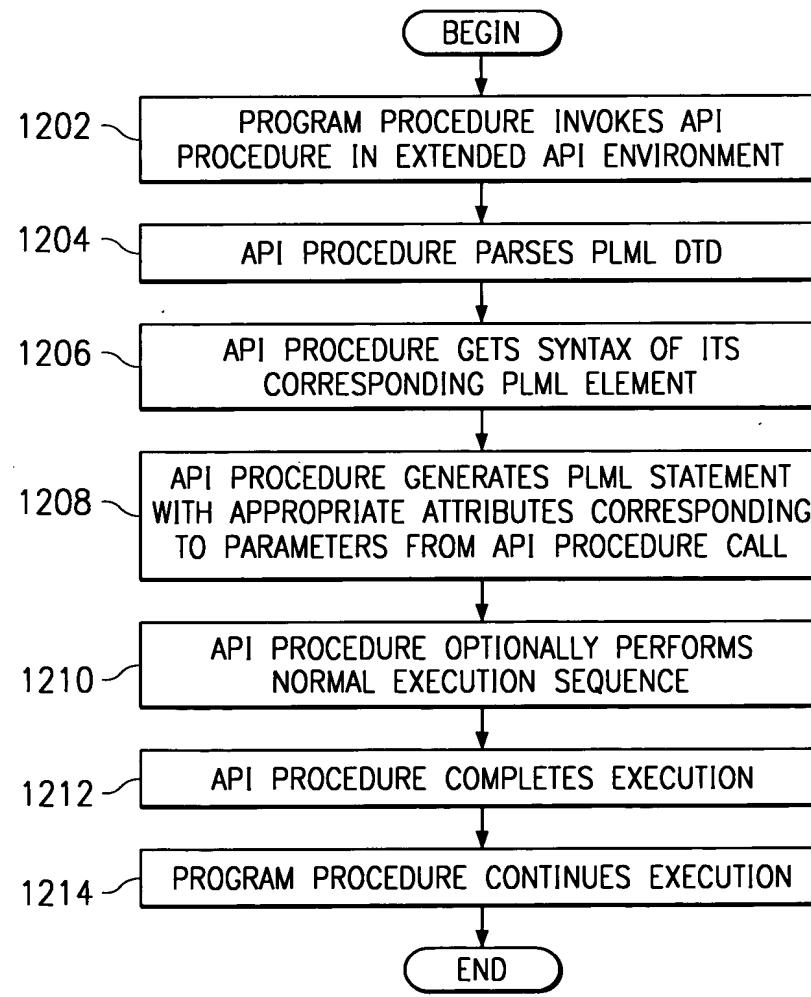
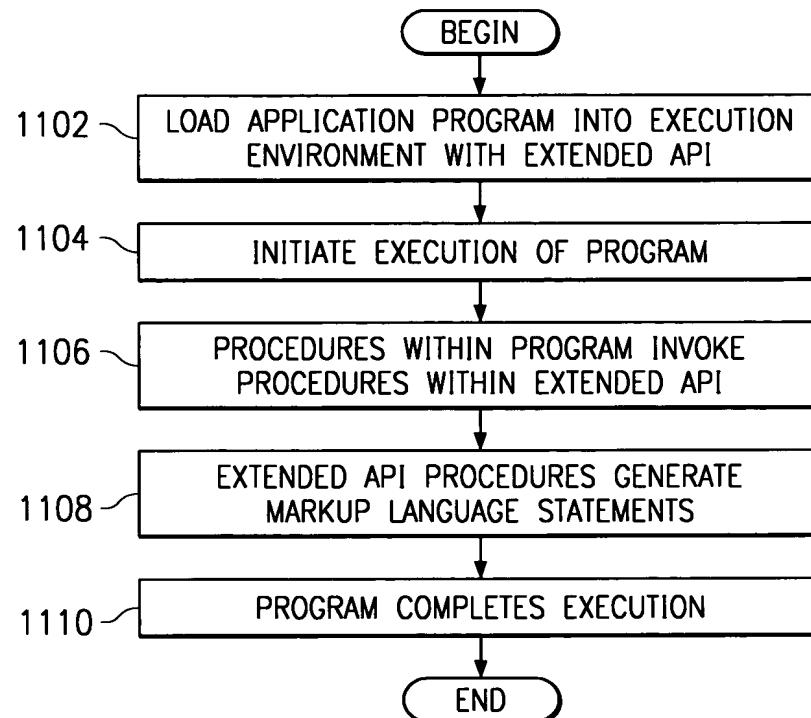
*FIG. 10A*



*FIG. 10B*

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS	SUBCLASS
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O.G. FIG.  
CLASS SUBCLASS

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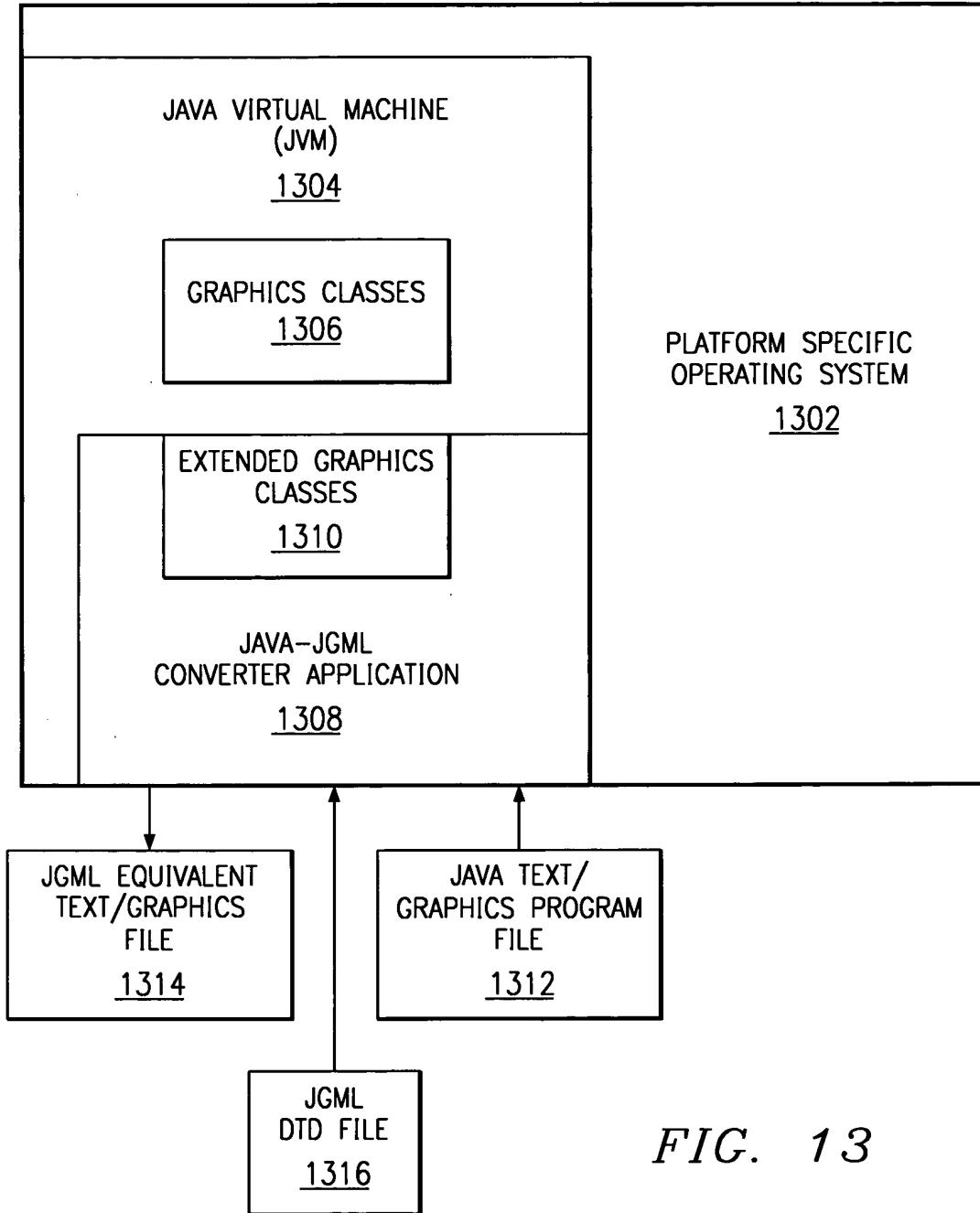


FIG. 13

APPROVED	O.G. FIG.
BY	
DRAFTSMAN	CLASS SUBCLASS

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```

1402 { public class JGML Graphics extends Graphics
        {
            public void drawLine (int x1, int y1, int x2, int y2)
            {
                1406 { Analyze JGML DTD for "drawLine" syntax
                1408 { Generate JGML output statement with "drawLine" syntax and current parameters
                    {
                        1410 { printLine ("<drawLine x1=\\""+x1+"\\\"y1=\\""+y1+"\\\"x2=\\""+x2
                                    +"\\\"y2=\\""+y2+"\\\"/>");

                        1412 { Analyze JGML DTD for "clearRect" syntax
                            Generate JGML output statement with "clearRect" syntax and current parameters
                            printLine (
                                <clearRect x=\\""+x+"\\\"y=\\""+y+"\\\"width=\\""+width+"\\\"height=\\""+height+"\\\"/>);

                }
            }
        }
    }
}

FIG. 14

```

APPROVED	O.G. FIG.
BY	CLASS
DRAFTSMAN	SUBCLASS

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```
<!-- Java Graphics Markup Language (JGML) Document Type Definition (DTD) -->
<!ENTITY % base_content_model
  '(copyArea | drawLine | fillRect | drawRect | clearRect |
   drawRoundRect | fillRoundRect | draw3Drect | fill3Drect |
   drawOval | fillOval | drawArc | fillArc | drawPolyline |
   drawPolygon | fillPolygon | drawString | drawChars |
   drawBytes | drawImage | dispose | finalize | clipRect |
   setClip | setColor | setPaintMode | translate | setXORMode |
   setFont)*'

>
<!ELEMENT jgml %base_content_model;>
<!ELEMENT copyArea EMPTY>
<!ATTLIST
  copyArea
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
    dx        CDATA      #REQUIRED
    dy        CDATA      #REQUIRED
  >
<!ELEMENT drawLine EMPTY>
<!ATTLIST
  drawLine
    x1        CDATA      #REQUIRED
    y1        CDATA      #REQUIRED
    x2        CDATA      #REQUIRED
    y2        CDATA      #REQUIRED
  >
<!ELEMENT fillRect EMPTY>
<!ATTLIST
  fillRect
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
  >
<!ELEMENT drawRect EMPTY>
<!ATTLIST
  drawRect
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
  >
<!ELEMENT clearRect EMPTY>
<!ATTLIST
  clearRect
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
  >
```

*FIG. 15A*

APPROVED BY	O.G. FIG. CLASS	SUBCLASS
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```

<!ELEMENT drawRoundRect    EMPTY>
<!ATTLIST
  drawRoundRect
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
    arcWidth  CDATA      #REQUIRED
    arcHeight CDATA      #REQUIRED
  >
<!ELEMENT fillRoundRect   EMPTY>
<!ATTLIST
  fillRoundRect
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
    arcWidth  CDATA      #REQUIRED
    arcHeight CDATA      #REQUIRED
  >
<!ELEMENT draw3DRect     EMPTY>
<!ATTLIST
  draw3dRect
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
    raised   CDATA      #REQUIRED
  >
<!ELEMENT fill3DRect     EMPTY>
<!ATTLIST
  fill3DRect
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
    raised   CDATA      #REQUIRED
  >
<!ELEMENT drawOval       EMPTY>
<!ATTLIST
  drawOval
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
  >
<!ELEMENT fillOval       EMPTY>
<!ATTLIST
  fillOval
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
  >

```

*FIG. 15B*

APPROVED BY	O.G. FIG. CLASS	FIG. SUBCLASS
DRAFTSMAN		

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```

<!ELEMENT drawArc           EMPTY>
<!ATTLIST
  drawArc
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
    startAngle CDATA      #REQUIRED
    arcAngle   CDATA      #REQUIRED
  >
<!ELEMENT fillArc           EMPTY>
<!ATTLIST
  fillArc
    x          CDATA      #REQUIRED
    y          CDATA      #REQUIRED
    width     CDATA      #REQUIRED
    height    CDATA      #REQUIRED
    startAngle CDATA      #REQUIRED
    arcAngle   CDATA      #REQUIRED
  >
<!ELEMENT drawPolyLine       EMPTY>
<!ATTLIST
  drawPolyLine
    xPoints   CDATA      #REQUIRED
    yPoints   CDATA      #REQUIRED
    nPoints   CDATA      #REQUIRED
  >
<!ELEMENT drawPolygon        EMPTY>
<!ATTLIST
  drawPolygon
    xPoints   CDATA      #IMPLIED
    yPoints   CDATA      #IMPLIED
    nPoints   CDATA      #IMPLIED
    p         CDATA      #IMPLIED
  >
<!ELEMENT fillPolygon        EMPTY>
<!ATTLIST
  fillPolygon
    xPoints   CDATA      #IMPLIED
    yPoints   CDATA      #IMPLIED
    nPoints   CDATA      #IMPLIED
    Polygon   CDATA      #IMPLIED
  >
<!ELEMENT drawString         EMPTY>
<!ATTLIST
  drawString
    str       CDATA      #REQUIRED
    x         CDATA      #REQUIRED
    y         CDATA      #REQUIRED
  >

```

*FIG. 15C*

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS    SUBCLASS

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```

<!ELEMENT drawChars          EMPTY>
<!ATTLIST drawChars
    data      CDATA #REQUIRED
    offset   CDATA #REQUIRED
    length  CDATA #REQUIRED
    x        CDATA #REQUIRED
    y        CDATA #REQUIRED
  >
<!ELEMENT drawBytes          EMPTY>
<!ATTLIST drawBytes
    offset   CDATA #REQUIRED
    length  CDATA #REQUIRED
    x        CDATA #REQUIRED
    y        CDATA #REQUIRED
  >
<!ELEMENT drawImage          EMPTY>
<!ATTLIST drawImage
    img      CDATA #REQUIRED
    x        CDATA #IMPLIED
    y        CDATA #IMPLIED
    width   CDATA #IMPLIED
    height  CDATA #IMPLIED
    dx1     CDATA #IMPLIED
    dy1     CDATA #IMPLIED
    dx2     CDATA #IMPLIED
    dy2     CDATA #IMPLIED
    sx1     CDATA #IMPLIED
    sy1     CDATA #IMPLIED
    sx2     CDATA #IMPLIED
    sy2     CDATA #IMPLIED
    bgcolor CDATA #IMPLIED
    observer CDATA #REQUIRED
  >
<!ELEMENT dispose            EMPTY>
<!ELEMENT finalize           EMPTY>
<!ELEMENT clipRect           EMPTY>
<!ATTLIST clipRect
    x        CDATA #REQUIRED
    y        CDATA #REQUIRED
    width   CDATA #REQUIRED
    height  CDATA #REQUIRED
  >

```

*FIG. 15D*

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS SUBCLASS

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```

<!ELEMENT setClip          EMPTY>
<!ATTLIST
    setClip
        x          CDATA      #IMPLIED
        y          CDATA      #IMPLIED
        width     CDATA      #IMPLIED
        height    CDATA      #IMPLIED
        clip      CDATA      #IMPLIED
    >
<!ELEMENT setColor         EMPTY>
<!ATTLIST
    setColor
        color     CDATA      #REQUIRED
<!ELEMENT setPaintmode    EMPTY>
<!ELEMENT translate       EMPTY>
<!ATTLIST
    translate
        x          CDATA      #REQUIRED
        y          CDATA      #REQUIRED
    >
<!ELEMENT setXORMode      EMPTY>
<!ATTLIST
    setXORMode
        c1        CDATA      #REQUIRED
    >
<!ELEMENT setFont          EMPTY>
<!ATTLIST
    setFont
        font      CDATA      #REQUIRED
    >
<!-- End of DTD for Java Graphics Markup Language -->

```

*FIG. 15E*

APPROVED	O.G. FIG.
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- clearRect (int, int, int, int) ,  
Clears the specified rectangle by filling it with the background color of the current drawing surface.
- clipRect (int, int, int, int)  
Intersects the current clip with the specified rectangle.
- copyArea (int, int, int, int, int, int)  
Copies an area of the component by a distance specified by dx and dy.
- create ( )  
Creates a new Graphics object that is a copy of this Graphics object.
- create (int, int, int int)  
Creates a new Graphics object based on this Graphics object, but with a new translation and clip area.
- dispose ( )  
Disposes of this graphics context and releases any system resources that it is using.
- draw3DRect (int, int, int, int, boolean)  
Draws a 3-D highlighted outline of the specified rectangle.
- drawArc (int, int, int, int, int, int)  
Draws the outline of a circular or elliptical arc covering the specified rectangle.
- drawBytes (byte[ ], int, int, int, int)  
Draws the text given by the specified byte array, using this graphics context's current font and color.
- drawChars (char[ ], int, int, int, int)  
Draws the text given by the specified character array, using this graphics context's current font and color.
- drawImage (Image, int, int, Color, ImageObserver)  
Draws as much of the specified image as is currently available.
- drawImage (Image, int, int, int, int, Color, ImageObserver)  
Draws as much of the specified image as has already been scaled to fit inside the specified rectangle.
- drawImage (Image, int, int, int, int, int, ImageObserver)  
Draws as much of the specified image as has already been scaled to fit inside the specified rectangle.
- drawImage (Image, int, int, int, int, int, int, int, int, Color, ImageObserver)  
Draws as much of the specified area of the specified image as is currently available, scaling it on the fly to fit inside the specified area of the destination drawable surface.
- drawImage (Image, int, int, int, int, int, int, int, int, ImageObserver)  
Draws as much of the specified area of the specified image as is currently available, scaling it on the fly to fit inside the specified area of the destination drawable surface.

*FIG. 16A*

APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
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- drawLine (int, int, int, int)  
Draws a line, using the current color, between the points (x1, y1) and (x2, y2) in this graphics context" coordinate system.
- drawOval (int, int, int, int)  
Draws the outline of an oval.
- drawPolygon (int[ ], int[ ], int)  
Draws a closed polygon defined by arrays of x and y coordinates.
- drawPolygon (Polygon)  
Draws the outline of a polygon defined by the specified Polygon object.
- drawPolyline (int[ ], int[ ], int)  
Draws a sequence of connected lines defined by arrays of x and y coordinates.
- drawRect (int, int, int, int)  
Draws the outline of the specified rectangle.
- drawRoundRect (int, int, int, int, int, int)  
Draws an outlined round-cornered rectangle using this graphics context's current color.
- drawString (String, int, int)  
Draws the text given by the specified string, using this graphics context's current font and color.
- fill3DRec (int, int, int, int, boolean)  
Paints a 3-D highlighted rectangle filled with the current color.
- fillArc (int, int, int, int, int, int)  
Fills a circular or elliptical arc covering the specified rectangle.
- fillOval (int, int, int, int)  
Fills an oval bounded by the specified rectangle with the current color.
- fillPolygon (int[ ], int[ ], int)  
Fills a closed polygon defined by arrays of x and y coordinates.
- fillPolygon (Polygon)  
Fills the polygon defined by the specified Polygon object with the graphics context's current color.
- fillRect (int, int, int, int)  
Fills the specified rectangle.
- fillRoundRect (int, int, int, int, int, int)  
Fills the specified rounded corner rectangle with the current color.
- finalize ()  
Disposes of this graphics context once it is no longer referenced.
- getClip ()  
Gets the current clipping area.

*FIG. 16B*

APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
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- getClipBounds ( )  
    Returns the bounding rectangle of the current clipping area.
- getClipRect ( )  
    Deprecated.
- getColor ( )  
    Gets this graphics context's current color.
- getFont ( )  
    Gets the current font.
- getFontMetrics ( )  
    Gets the font metrics of the current font.
- getFontMetrics (Font)  
    Gets the font metrics for the specified font.
- setClip (int, int, int, int)  
    Sets the current clip to the rectangle specified by the given coordinates.
- setClip (Shape)  
    Sets the current clipping area to an arbitrary clip shape.
- setColor (Color)  
    Sets this graphics context's current
- setFont (Font)  
    Sets this graphics context's font to the specified font.
- setPaintMode ( )  
    Sets the paint mode of this graphics context to overwrite the destination with this graphics context's current color.
- setXORMode (Color)  
    Sets the paint mode of this graphics context to alternate between this graphics context's current color and the new specified color.
- toString ( )  
    Returns a String object representing this Graphics object's value.
- translate (int, int)  
    Translates the origin of the graphics context to the point (x, y) in the current coordinate system.

*FIG. 16C*

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1702 { <! ELEMENT drawLine EMPTY>  
1706 { <! ATTLIST drawLine x1 CDATA #REQUIRED  
x2 CDATA #REQUIRED  
y1 CDATA #REQUIRED  
y2 CDATA #REQUIRED  
>  
1700 }  
1704 { <! ELEMENT clearRect EMPTY>  
1708 { <! ATTLIST clearRect x CDATA #REQUIRED  
y CDATA #REQUIRED  
width CDATA #REQUIRED  
height CDATA #REQUIRED  
>

FIG. 17

1800 {  
1802 ~ drawLine (23, 43, 50, 60);  
1804 ~ drawLine (50, 60, 27, 80);  
1806 ~ clearRect (0, 0, 10, 10);

FIG. 18

1900 {  
1902 ~ <? xml version="1.0" ?>  
<! DOCTYPE jgml SYSTEM "jgml.dtd" >  
< jgml >  
1904 ~ < drawLine x1="23" y1="43" x2="50" y2="60" />  
1906 ~ < drawLine x1="50" y1="60" x2="27" y2="80" />  
1906 ~ < clearRect x="0" y="0" width="10" height="10" />  
< /jgml >

FIG. 19